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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/304,841	05/05/1999	MASAYASU KOYAMA	Q54287	1233

7590 04/22/2005  
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EXAMINER

PATTERSON, MARC A

ART UNIT PAPER NUMBER

1772

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Supplemental  
Notice of Allowability**

Application No.

09/304,841

Examiner

Marc A Patterson

Applicant(s)

KOYAMA ET AL.

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 09 January 2005.
2. ☒ The allowed claim(s) is/are 1,4,6,8,10 and 12-15.
3. ☒ The drawings filed on 05 May 1999 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 5/5/99, 5/23/00, 4/20/01, 11/6/01, 10/4/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Abraham Rosner on January 9, 2005.

The application has been amended as follows:

Cancel Claims 11, 16 and 20.

Cancel the Abstract, which currently reads as follows:

---ABSTRACT THE DISCLOSURE

A thermoplastic resin composition containing an oxygen-absorbing agent, wherein a resin matrix of the thermoplastic resin composition is substantially non-compatible and is composed of a blend of thermoplastic resins or elastomers, and the non-compatible thermoplastic resins and elastomers are present as a non-uniformly distributed structure in the resin matrix.

The packaging container or cap of this invention suppresses the lowering of flavor retention incident to the dissolving out of the oxygen absorbing agent or its oxidation product even after retorting sterilization. The preservability of the contents and flavor retention can be achieved for a long period of time.

According to a preferred embodiment, the oxygen absorbing speed can be increased. After storage for a long time, or after heat sterilization, a rugged state does not occur. There can

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be formed the oxygen-absorbing resin composition and the packaging container having excellent outer appearance.---

And substitute the abstract as follows:

---ABSTRACT

A thermoplastic resin composition containing an oxygen-absorbing agent, wherein a resin matrix of the thermoplastic resin composition is substantially non-compatible and is composed of a blend of thermoplastic resins or elastomers, and the non-compatible thermoplastic resins and elastomers are present as a non-uniformly distributed structure in the resin matrix. The packaging container or cap of this invention suppresses the lowering of flavor retention incident to the dissolving out of the oxygen absorbing agent or its oxidation product even after retorting sterilization. The preservability of the contents and flavor retention can be achieved for a long period of time. According to a preferred embodiment, the oxygen absorbing speed can be increased. After storage for a long time, or after heat sterilization, a rugged state does not occur. There can be formed the oxygen-absorbing resin composition and the packaging container having excellent outer appearance.---

Cancel Claim 1, which currently reads as follows:

---A thermoplastic resin composition comprising a blend of a plurality of thermoplastic resins and/or elastomers, and oxygen absorbing agent particles dispersed in the thermoplastic resins and/or the elastomers, wherein:

the plurality of the thermoplastic resins and/or the elastomers are incompatible with each other; and

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the oxygen absorbing agent particles comprise a reducing iron powder and a layer of an oxidation promoter or a catalyst which sticks to the surfaces of the reducing iron powder, the oxygen absorbent agent particles having an average particle diameter of 10 to 50  $\mu\text{m}$  as measured by a laser scattering method, and having a flat or spindle-like shape.--

And substitute Claim 1 as follows:

---A thermoplastic resin composition comprising a blend of a plurality of thermoplastic resins and/or elastomers, and oxygen absorbing agent particles dispersed in the thermoplastic resins and/or the elastomers, wherein:

the plurality of the thermoplastic resins and/or the elastomers are incompatible with each other; and

the oxygen absorbing agent particles comprise a reducing iron powder and a layer of an oxidation promoter or a catalyst which sticks to the surfaces of the reducing iron powder, the oxygen absorbent agent particles having an average particle diameter of 10 to 50  $\mu\text{m}$  as measured by a laser scattering method, and having a flat or spindle-like shape;

and wherein the oxygen absorbing agent particles have an aspect ratio (short axis/long axis) of 0.6 or below, which are being present in an amount of at least 50%, and have a compression degree of at least 20%.—

Cancel Claim 12, which currently reads as follows:

---An oxygen-absorbing resin composition obtained by blending 1 to 200 parts by weight of an oxygen-absorbing agent according to Claim 11 into 100 parts by weight of a thermoplastic resin.---

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And substitute Claim 12 as follows:

--An oxygen-absorbing resin composition obtained by blending 1 to 200 parts by weight of an oxygen-absorbing agent according to Claim 11 into 100 parts by weight of a thermoplastic resin, the oxygen-absorbing agent comprising oxygen-absorbing agent particles which comprise a reducing iron powder and an oxidation – promoting agent or a catalyst firmly adhered to surfaces of said iron reducing powder, and which has a specific surface area of not smaller than  $0.5 \text{ m}^2/\text{g}$  and an apparent density of not larger than  $2.2 \text{ g/cc}$ , and in which the oxidation – promoting agent or the catalyst is present in an amount of from 0.1 to 5% by weight per the reducing iron powder, wherein the oxygen absorbing particles have an average particle diameter of 10 to  $50 \text{ }\mu\text{m}$  as measured by a laser scattering method and an aspect ratio (short axis/long axis size) of 0.6 or below being present in an amount of at least 50% and is a flat or spindle-shaped particle having a compression degree of at least 20%.--

On page 1, line 7 of the specification, after the phrase ‘Application No. 08/954,077’ insert the phrase --filed October 20, 1997, now abandoned,--

2. The following is an examiner’s statement of reasons for allowance: The prior art of record discloses a thermoplastic resin composition comprising a blend of a plurality of thermoplastic resins and oxygen absorbing agent particles dispersed in the thermoplastic resins, but fails to disclose a blend of thermoplastic resins which is incompatible and oxygen absorbing agent particles comprising a reducing iron powder and a layer of oxidation promoter or catalyst,

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the oxygen absorbing agent particles having an aspect ratio of 0.6 or below present in an amount of at least 50%, and having a compression degree of at least 20%.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc A Patterson whose telephone number is 571-272-1497.

The examiner can normally be reached on Mon - Fri 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Marc Patterson*  
Marc A. Patterson, PhD.  
Examiner  
Art Unit 1772

*Harold Pyon*  
1772 3/10/05